

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A method of fuel cell start-up for a fuel cell system having a hydrogen source connected to an anode inlet of a fuel cell stack and an oxygen source connected to a cathode inlet of the fuel cell stack, the cathode inlet being connected to a compressor, the method comprising the steps of:

purging hydrogen from the fuel cell stack with air prior to startup;

starting the fuel cell system by re-introducing said hydrogen to the anode inlet of the fuel cell stack, said hydrogen reacting with said air to generate an initial amount of electrical power;

determining ~~an~~ said initial amount of electrical power generated by the fuel cell stack with an electronic controller;

applying an electrical load to the fuel cell stack via the compressor for supplying oxygen to the cathode inlet based on said initial amount of electrical power of the fuel cell stack; and

gradually increasing said electrical load on the fuel cell stack over time while using ~~said~~ increased electrical power generated to drive the compressor to supply additional oxygen to the cathode inlet.

2. (Previously Presented) The method according to claim 1, wherein said step of introducing hydrogen to the anode inlet includes opening a valve to release hydrogen flow to the anode inlet.

3. (Original) The method according to claim 2, wherein said valve is opened manually.

4. (Original) The method according to claim 2, wherein said valve is opened by an electronic solenoid.

5. (Previously Presented) The method according to claim 1, wherein said step of gradually increasing said electrical load on the fuel cell stack is performed by said electronic controller.

6. (Previously Presented) The method according to claim 1, wherein said step of gradually increasing said electrical load to the fuel cell stack is performed until the fuel cell stack produces enough electrical power to operate at a positive net power.

7. (Currently Amended) The method according to claim 1, wherein said step of gradually increasing said electrical load to the fuel cell stack is performed on an open loop basis according to a predetermined time ~~timed~~ schedule.

8. (Previously Presented) The method according to claim 1, further comprising said step of releasing a stored oxygen source into the cathode inlet after said step of introducing hydrogen to the anode inlet.

9. (Previously Presented) The method according to claim 1, further comprising said step of releasing a pressurized gas into a passage upstream of the cathode inlet for forcing oxygen in said passage into said fuel cell stack.

10. (Original) The method according to claim 9, wherein said pressurized gas is provided from a burp valve provided in an anode exhaust passage of the fuel cell stack.

11. (Previously Presented) The method according to claim 5, wherein said electronic controller monitors cell voltages of the fuel cell stack and commands a compressor motor to load the fuel cell stack and to increase said load on the fuel cell stack as said cell voltages of the fuel cell stack increase.